To: FCC - whom it may concern

May 13, 1998

Regarding RM 9096 for alternate use of 5850 to 5925 MHz Amateur Band

I am writing this document in response to the petition to remove the upper portion of the 5.8 GHz Amateur band. The upper portion of this band is used by radio amateurs in the San Francisco Bay Area for transport of digital and analog communication links between the different regions of the Bay Area. These links carry an amateur telephone network along with channels used to interconnect several amateur radio groups.

This telephone network is periodically used by the State of California Office of Emergency Services (OES) through agreements with local amateurs. In fact, some of the equipment has been donated by that office. In addition, the OES has this network installed in its headquarters in Sacramento. Our network was used in both the Loma Prieta Earthquake to carry emergency traffic critical to the state of California, and the Oakland Fire to carry their emergency traffic. This system was the only system that the city of Oakland had to communicate with State OES during that devastating fire. Amateurs responded by providing a portable microwave relay directly to the fire line. The bandwidth of this system is the same as a commercial radio system – 672 digitized voice channels on some links 24 channels on others.

The channels used to link amateur groups together that we provided have helped to relieve the congestion on the lower frequency bands in the Bay Area. Without our network it would be virtually impossible to link many of the radio systems (2 meter and 70 centimeter) due to the crowding of the lower frequencies. We are now starting to use our network to transport data. Data services such as the Internet are becoming a fundamental part of our lives. As part of this, bandwidth is key. These amateur microwave frequencies are the only hope of amateurs to be able to do the exploratory work for the next generation data networks.

Our 5.8 GHz network uses older commercial equipment equipment made for the higher 6 GHz common carrier band that has been converted down to our band. Since 1974 we have spent tens of thousands of dollars and thousands of hours of our time to acquire this equipment and convert it into the amateur band. We have located and installed antenna systems using commercial quality parabolic dishes and feed systems. We have found that with great effort we could convert the radios down to about 5.8 GHz. Because of limitations in the cavity filters we need at least 100 MHz separation between transmit and receive frequencies forcing us to use the upper portion of the band. No other band has the range, the bandwidth, the propagation characteristics, or the equipment available to be suitable for these networks. The equipment we are using originally cost millions of dollars to build. It is top-grade commercial telephone equipment designed to be extremely reliable (99.995% availability).

This is not equipment that you can go to your nearest Radio Shack Store and replace for a few hundred dollars. The digital radios, digital channel banks, and digital switches used in this network are all Telephone Network Equipment standard. We have central office

battery backup and generator power so that the network can survive earthquake, fires, floods, and other disasters. This was proven in the stated disasters above – the network was 100% available throughout the emergencies. Our network plays an important role in Bay Area communications. The loss of the upper portion of the 5.8 GHz band would mean the loss of this network. The loss of this network would have a great impact on the ability of basic services to respond to a large disaster.

Recently the state OES has asked to use this network during the Watsonville Airshow in case of an emergency. The public services offered by amateurs by this network to the state would cease to be available. The cost to the taxpayer to duplicate these services would run in the millions of dollars, and it would probably fail in a disaster like all other commercial networks due to the lack of a dedicated volunteer service that continually maintains and services the equipment for free.

It would mean much more overcrowding in the lower bands as amateurs currently using our network would have to scramble to find frequencies for their links now carried by our network, but most importantly: it would send a message---a message to all other amateurs---that says don't go out on a limb to be creative, don't spend your time and money to use the band for new services----stick with what you can buy at your local ham store or find other hobbies.

Austin Lesea
25542 Mt. Bache Rd.
Los Gatos, Ca 95033
AB6VU